

Citation for published version:

Goodall, J & Johnston-Wilder, S 2015, 'Learned Helplessness and Maths Resilience', Paper presented at The Shard Symposium, London, UK United Kingdom, 16/01/15 - 16/01/15.

Publication date:

2015

Document Version

Early version, also known as pre-print

[Link to publication](#)

University of Bath

Alternative formats

If you require this document in an alternative format, please contact:
openaccess@bath.ac.uk

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

The background of the slide is a photograph of the University of Bath crest. The crest features a blue shield with two golden sun faces, a sword, and a cross. It is flanked by a green dragon on the left and a golden lion on the right. The entire scene is set against a backdrop of green foliage.

Learned helplessness and maths resilience

- Janet Goodall, University of Bath
- Sue Johnston-Wilder, University of Warwick

Math – The only
place where people
can buy 60
watermelons and no
one asks them WHY.

Mother –daughter dyad

Heather
(Mother)

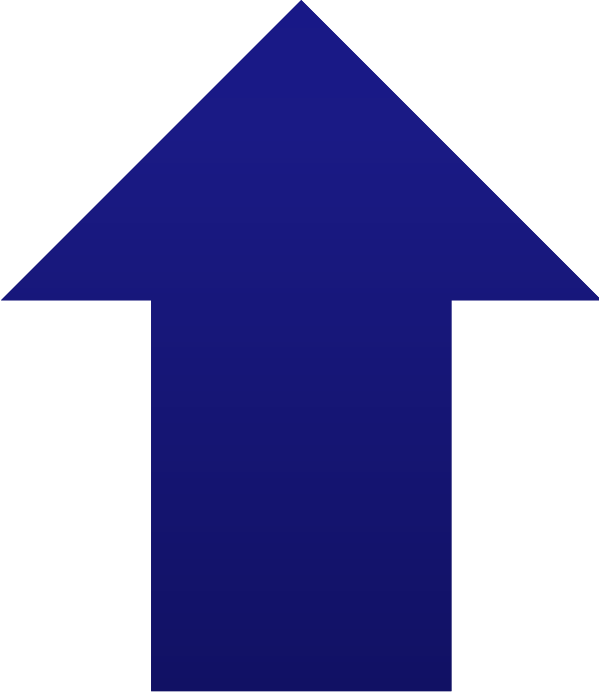
Rose
(Daughter)

Mathematics



```
graph TD; Heather[Heather (Mother)] --> Mathematics((Mathematics)); Rose[Rose (Daughter)] --> Mathematics;
```

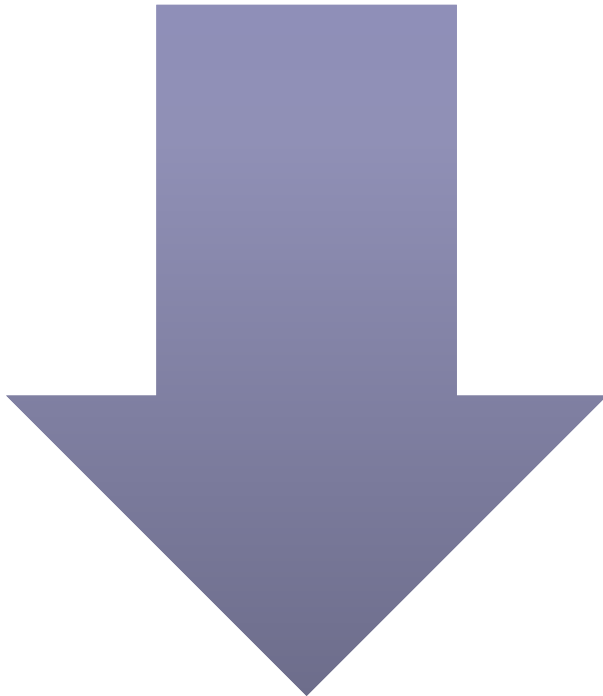
- Interference with adaptive reasoning - when people become convinced that there is no relation between input and output in events [Seligman 1972: 408](#)
- → Belief that one can not control events
- Is about *perception* rather than reality (though the two may overlap)



Internal helplessness

- The subject can not fix the issue but others could

No amount of effort or ability will change the situation



External helplessness

- No one can fix the issue

How they learned to be helpless



Heather's story

- Having enjoyed maths till year 6
- Reprimanded by her teacher for using the wrong method to arrive at an answer, and the teacher “made me feel stupid in front of my peers when I explained my methods”.
- Maths became and remained problematic
- Feelings of shame, guilt
- “Calculator is my best friend”

- Fell behind in maths early on
- Lost confidence in own ability
- Accused by teachers of not trying hard enough
- Support promised but did not materialise

- “Swallowed more and more pride” to ask teachers how to help Rose
- Told even if she had GCSE in maths, would not be able to help
- “Best left to the school” – school presenting as owning maths and mathematical knowledge

- Heather asked help of Diana, prepared to be laughed at, “other than shame and embarrassment what did I have to lose?”
- But, “It was like I was asking directions somewhere....”
- “The only major change is confidence, and we’re both so much happier and actually enjoy the subject”

- Hence feelings of “shame” and “guilt”
- Overcome by increased confidence, coming from a *removal* of personal blame/guilt

Recommendations

- Value of parental engagement well known
- Schools and other groups to recognise the importance of PARENTAL maths resilience
- As well as for children/young people